

Reissue 5,912,882  
Attorney Docket No. QCPA235  
Customer No. 23696

PATENT  
**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In Re Reissue Application of	)	
	)	For:
Byron Y. Yafuso, et al.	)	<b>METHOD AND APPARATUS</b>
	)	<b>FOR PROVIDING A PRIVATE</b>
	)	<b>COMMUNICATION SYSTEM IN</b>
Patent No. 5,912,882	)	<b>A PUBLIC SWITCHED</b>
	)	<b>TELEPHONE NETWORK</b>
Issued: 06/15/1999	)	

**REQUEST FOR APPROVAL OF AMENDMENTS**  
**TO THE DRAWINGS**

Asst. Commissioner for Patents  
Washington, D.C. 20231

Assistant Commissioner:

Approval of the following drawing amendments to the reissue application is  
requested:

I hereby certify that this correspondence is being  
deposited with the United States Postal Service with  
sufficient postage as Express mail in an envelope  
addressed to the Commissioner of Patents and  
Trademarks, Washington, D.C. 20231, on:

06/14/2001

(Date of Deposit)

Carola Emelius-Swartz

(Registered Representative)

(Signature)

06/14/2001

(Date of Signature)

**IN THE DRAWINGS**

Please amend FIGs. 3A, 3B, 4, 5, and 6 as follows:

In FIG. 3A, please amend the MICROPHONE reference number from "254" to - - 154 - -.

In FIG. 3B, please amend block 214 to replace "DE-ENCRYPTION" with - - DECRYPTION - -.

In FIG. 4, please amend block 294 to replace "DE-ENCRYPTION" with - - DECRYPTION - -.

In FIG. 5, please amend block 394 to replace "DE-ENCRYPTION" with - - DECRYPTION - -.

In FIG. 5, please amend the CDMA RECEIVER reference number from "372" to - - 392 - -.

In FIG. 6 amend the PSTN reference number from "10" to - - 450 - -.

09001410-061401  
T0490-04T03050

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### REMARKS

Each of the amendments to the drawings indicated hereinabove is supported by the specification. These amendments add no new matter to the information originally filed in the Application for Patent that is the basis of the issued U.S. Patent No. 5,912,882 the furtherance of which this Reissue Application is now filed.

A copy of the figures with the amendments indicated in red ink is provided herewith. Additionally, Applicants provide amended copies of the figures as formal drawings.

Should the Examiner have any questions or comments regarding this amendment, he is cordially invited to telephone the undersigned attorney for Applicants.

Respectfully submitted,

Dated: 06/14/2001

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09081410-061401

**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In Re Reissue Application of

Byron Y. Yafuso, et al.

Patent No. 5,912,882

Issued: 06/15/1999

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For:

**METHOD AND APPARATUS  
FOR PROVIDING A PRIVATE  
COMMUNICATION SYSTEM IN  
A PUBLIC SWITCHED  
TELEPHONE NETWORK**

**PRELIMINARY AMENDMENT TO REISSUE APPLICATION**

Assistant Commissioner for Patents  
Washington, D.C. 20231

Assistant Commissioner:

This preliminary amendment is being filed concurrently with the above-mentioned Patent Reissue Application. Applicants herein present amendments to add new claims enlarging the scope of the issued patent. Applicants submit the preliminary amendment to the specification and figures to correct typographical errors. Applicants respectfully request consideration and allowance of the claims.

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as Express mail in an envelope addressed to the Commissioner of Patents and Trademarks, Washington, D.C. 20231, on:

06/14/2001

(Date of Deposit)

Carola Emelius Swartz

(Name of Person Making Deposit)

(Signature)

06/14/2001

(Date of Signature)

06/14/2001 09:44:00

## IN THE DRAWINGS

Applicants provide amendments to the drawings on a separate document. The amendments to the drawings are supported by the specification. These amendments add no new matter to the information originally filed in the Application for Patent that is the basis of the issued U.S. Patent No. 5,912,882 the furtherance of which this Reissue Application is now filed.

A copy of the figures with the amendments indicated in red ink is provided. Additionally, Applicants provide amended copies of the figures as formal drawings.

## IN THE SPECIFICATION

Please replace the amended paragraphs in the specification as follows:

Column 1, beginning at line 36, 4<sup>th</sup> paragraph:

Numerous standards exist for the implementation of cellular telephone communications. These standards include the advanced mobile phone system (AMPS), Global System for Mobile Communication (GSM), and Code Division Multiple Access (CDMA). The spread spectrum modulation technique of CDMA has significant advantages over other modulation techniques for multiple access communication systems. For example, the use of CDMA results in a much higher spectral efficiency than can be achieved using other multiple access schemes.

Column 2, beginning at line 53, 7<sup>th</sup> paragraph:

The network call manager further includes a telephone line switch matrix, coupled to the telephone network interface, for providing an information signal received from an active member user over a selected telephone line to the remaining non-active member users. A network manager controller identifies the active member user on the basis of push-to-talk (PTT) request signals received from the member users' telephones over the plurality of telephone lines. The active member user may be identified as, for example, the member user from which a PTT request signal is first received after the previously active member user has relinquished speaking privileges. Alternately, the active member user may be chosen by using predefined user priority criteria to evaluate all PTT request signals queued by the network call manager.

Column 4, beginning at line 28, 3<sup>rd</sup> paragraph:

Telephone calls are routed by the cell-site base stations 56 and 58 between the CDMA mobiles 22 and 24 and a CDMA mobile switching center (MSC) 60, which will typically be located within a mobile telephone switching office (not shown). The primary purpose of the MSC 60 is to provide voice path connections between the CDMA mobiles 22 and 24 and the PSTN 10. To this end the MSC 60 performs functions such as routing data between MSC modems 62 and CDMA mobiles 22 and 24 by way of the appropriate CDMA base station 56 or 58. The MSC 60 also performs other tasks, including paging of a CDMA mobile when a call is received from the PSTN 10 and switching calls to available PSTN lines via a plurality of T1 channels 64. A set of MSC modems 62 serves to convert the digital information signals received from the CDMA mobiles 22 and 24 to analog signals suitable for transmission over the PSTN 10, and likewise converts analog signals from the PSTN 10 to digital signals subsequently provided to the CDMA mobiles 22 and 24.

Column 4, beginning at line 47, 4<sup>th</sup> paragraph:

The AMPS cellular communication system 18 also includes a number of cells, two of which are identified in FIG. 1 as including cell-site base stations 70 and 72. Each cell may be partitioned into a number of sectors, where communication with AMPS mobiles 28 and 30 within a given sector is handled by a cell-site transceiver providing radio coverage over the sector. Telephone calls are routed by the cell-site base stations 70 and 72 between the AMPS mobiles 28 and 30 and an AMPS mobile switching center (MSC) 76, which is coupled to the PSTN 10 via a plurality of T1 channels 80.

Column 11, beginning at line 22, 2<sup>nd</sup> paragraph:

After a new active member user has been identified by the PTT controller 504 on the basis of the received PTT tone requests, the PTT controller 504 configures a multicast switch 510 to accept the reverse link voice or data information exclusively from the T1 channel 44 associated with the currently active member user. That is, the reverse link information from each of the other T1 channels, each of which has been assigned to one of the remaining (i.e., non-active) member users, is not multicast by the multicast switch 510. The PTT controller 504 also configures the multicast switch 510 to provide the reverse link information accepted from the newly identified active member user to the T1 channels associated with each non-active member user. Because PTT

tone requests are transmitted only on the reverse links of non-active member users, such PTT tone requests advantageously do not interfere with the receipt of reverse link information from the active member user.

Column 12, beginning at line 1, 1<sup>st</sup> paragraph:

Referring to FIG. 7, a block diagram is shown of a land line PTT telephone having transmit and receive sections 540 and 542 designed for communication using analog tones. During PTT operation, an input switch 548 is nominally set to pole 550 by PTT processor 552 so as to couple voice information from an input microphone 554 to the PSTN. However, when PTT switch 560 is engaged by the associated member user, the PTT processor 552 sets switch 548 to pole 562 and enables a tone generator 566. This allows the PTT tone requests generated by the tone generator 566 to be transmitted via the PSTN to the network call manager 450.

## IN THE CLAIMS

Please add the new claims 23 – 44 as follows:

23(New). In a wireless communication system, a method comprising:

- 2       transmitting a data frame;
- transmitting a push-to-talk frame subsequent to the data frame; and
- 4       transmitting a second data frame subsequent to the push-to-talk data  
      frame.

24(New). The method as in claim 23, wherein the push-to-talk frame initiates a

- 2       push-to-talk communication.

25(New). The method as in claim 24, wherein the second data frame is directed

- 2       to a private network.

26(New). The method as in claim 23, further comprising:

- 2       identifying the second data frame as a push-to-talk frame for  
      communication in the private network.

27(New). The method as in claim 23, wherein the second data frame is part of an

- 2       encrypted message, the method further comprising:  
      identifying a packet boundary of the encrypted message.

28(New). A program embodied on a computer-readable medium containing

- 2       computer-executable instructions to transmit a data signal structure embodied on  
      a carrier wave, comprising:
- 4       a first set of instructions for generating a first data packet;
- a second set of instructions for generating a push-to-talk packet; and
- 6       a third set of instructions for generating a second data packet.



29(New). A mobile station capable of voice communications through a wireless

2 communication network, comprising:

a switch operative to generate push-to-talk signals;

4 a processor coupled to the switch, operative to generate a push-to-talk  
data packet based on at least one of said push-to-talk signals; and

6 a transmitter coupled to the processor operative to send the push-to-talk  
data packet to the wireless communication network.

30(New). The mobile station as in claim 29, further comprising:

2 a second switch coupled to the transmitter, the second switch operative to  
select between normal operation and push-to-talk operation.

31(New). The mobile station as in claim 29, wherein the processor is further  
2 operative to generate push-to-talk requests.

32(New). The mobile station as in claim 31, wherein the mobile station is  
2 associated with a user that is a member of a push-to-talk private network and the  
private network is identified by an access number; and  
4 wherein the processor is further operative to generate authentication information  
for confirming membership in a private network.

33(New). The mobile station as in claim 29, further comprising:

2 encryption means for encrypting data packets for transmission to the private  
network via the wireless communication network.

34(New). The mobile station as in claim 29, wherein the mobile station is

2 operative to generate push-to-talk data packets interleaved with data packets.

35(New). The mobile station as in claim 34, further comprising:

2 vocoder means for converting voice data into compressed voice data  
packets for transmission from the mobile station.

36(New). A method for private network communications, comprising:

- 2        sending a push-to-talk request for initiating a push-to-talk communication
- in a private network, wherein the private network is accessed via a
- 4        public switching telephone network; and
- transmitting a push-to-talk data packet to at least one other user in the
- 6        private network.

37(New). The method as in claim 36, further comprising:

- 2        receiving a request for membership confirmation; and
- confirming membership in the private network.

38(New). A mobile station for communicating through a wireless communication network, comprising:

- 2        first means for transmitting signals in a normal operation to the public
- 4        switching telephone network; and
- second means for transmitting signals in a private network operation,
- 6        wherein the second means generates push-to-talk type data packets.

39(New). A mobile station operative for communicating through a wireless communication network, comprising:

- 2        switching means for switching between a normal operating mode and a
- 4        point-to-multipoint private network operating mode; and
- second means for generating point-to-multipoint private network request
- 6        signals.

40(New). In a wireless communication system, a network call manager, comprising:

- 2        a network controller operative to process and route data packets
- 4        transmitted within the wireless communication system; and
- a push-to-talk controller operative to process and route push-to-talk
- 6        requests and private network data packets.

41(New). The network call manager as in claim 40, wherein the push-to-talk

2 controller stores at least one access number associated with a first private  
network.

42(New). The network call manager as in claim 40, wherein the push-to-talk

2 controller stores at least one access number associated with a second private  
network.

43(New). The network manager as in claim 40, wherein the push-to-talk

2 controller is operative to receive more than one push-to-talk communications ,  
wherein push-to-talk communications are processed according to an associated  
4 priority of each push-to-talk communication.

44(New). A wireless communication system, comprising:

2 a network call manager for facilitating private communications  
simultaneously among a plurality of mobile users, at least some of said  
4 plurality of mobile users being members of a private network, the  
network call manager comprising:

6 means for receiving a point-to-point transmission comprising a  
plurality of voice data packets and a point-to-multipoint  
8 transmission comprising a plurality of private network data  
packets;

10 means for directing point-to-point transmissions;

means for receiving a request for a point-to-multipoint transmission  
12 to the private network;

means for directing the point-to-multipoint data packets to the  
14 private network in response to the request; and

a private network of mobile stations operative to transmit  
16 point-to-point transmissions and point-to-multipoint  
transmissions.

**REMARKS**

Applicants have presented herein amendments to the specification to correct typographical errors. A marked up version which shows all the changes relative to the previous version of the paragraphs is herewith provided on a separate page from the amendment as Appendix A. Applicants also added new claims and respectfully request consideration and allowance of claims 23-44 as presented hereinabove.

Respectfully submitted,

Dated: 06/14/2001

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0934410-061401  
F04T90-074B60

APPENDIX A

MARKED UP VERSION OF AMENDED SPECIFICATION:

Column 1, beginning at line 36, 4<sup>th</sup> paragraph:

Numerous standards exist for the implementation of cellular telephone communications. These standards include the advanced mobile phone system (AMPS), Global System for Mobile [communication] Communication (GSM), and Code Division Multiple Access (CDMA). The spread spectrum modulation technique of CDMA has significant advantages over other modulation techniques for multiple access communication systems. For example, the use of CDMA results in a much higher spectral efficiency than can be achieved using other multiple access schemes.

Column 2, beginning at line 53, 7<sup>th</sup> paragraph:

The network call manager further includes a telephone line switch matrix, coupled to the telephone network interface, for providing an information signal received from an active member user over a selected telephone line to the remaining non-active member users. A network manager controller identifies the active member user on the basis of push-to-talk (PTT) request signals received from the member users' telephones over the plurality of telephone lines. The active member user may be identified as, for example, the member user from which a PTT request signal is first received after the previously active member user has relinquished speaking privileges. Alternately, the active member user may be chosen by using predefined user priority criteria to evaluate all PTT request signals queued by the network call manager.

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and switching calls to available PSTN lines via a plurality of T1 channels 64. A set of MSC modems 62 serves to convert the digital information signals received from the CDMA mobiles 22 and 24 to analog signals suitable for transmission over the PSTN 10, and likewise converts analog signals from the PSTN 10 to digital signals subsequently provided to the CDMA mobiles 22 and 24.

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Column 12, beginning at line 1, 1<sup>st</sup> paragraph:

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PTT processor 552 so as to couple voice information from an input microphone 554 to the PSTN. However, when PTT switch 560 is engaged by the associated member user, the PTT processor 552 sets switch 548 to pole 562 and enables a tone generator 566. [The] This allows the PTT tone requests generated by the tone generator 566 to be transmitted via the PSTN to the network call manager 450.